

What is claimed is:

1. A computing device running on a multitasking operating platform and including an active application having input focus and a user input keyboard application, said computing device comprising:
 - a touch sensitive panel;
 - a user input keyboard window displayed on said touch sensitive panel;and
 - an active application window displayed on said touch sensitive panel, wherein user input generated in response to user contact within said keyboard window is forwarded to said active application without input focus shifting to said keyboard application.
2. The device of claim 1 wherein the user input received by said active application is displayed in said active application window.
3. The device of claim 2 wherein said keyboard window includes a plurality of user selectable keys.
4. The device of claim 3 wherein said keyboard window registers with said keyboard application.
5. The device of claim 3 wherein said keyboard application is configured to inhibit said keyboard application from gaining and/or maintaining input focus.
6. The device of claim 5 wherein said keyboard application automatically shifts input focus to another application should input focus be given to said keyboard application.
7. The device of claim 6 wherein said another application is selected from a task list of said multitasking operating platform.

8. The device of claim 7 wherein the another application is the next application in said task list.
9. The device of claim 5 wherein said keyboard application is configured to inhibit input focus shifting from said active application to said keyboard application.
10. The device of claim 5 wherein said keyboard application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.
11. The device of claim 2 wherein said keyboard application is configured to inhibit said keyboard application from gaining and/or maintaining input focus.
12. The device of claim 11 wherein said keyboard application automatically shifts input focus to another application should input focus be given to said keyboard application.
13. The device of claim 12 wherein said another application is selected from a task list of said multitasking operating platform.
14. The device of claim 13 wherein the another application is the next application in said task list.
15. The device of claim 11 wherein said keyboard application is configured to inhibit input focus shifting from said active application to said keyboard application.
16. The device of claim 11 wherein said keyboard application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.

17. The device of claim 1 wherein said keyboard application is configured to inhibit said keyboard application from gaining and/or maintaining input focus.
18. The device of claim 17 wherein said keyboard application automatically shifts input focus to another application should input focus be given to said keyboard application.
19. The device of claim 18 wherein said another application is selected from a task list of said multitasking operating platform.
20. The device of claim 19 wherein the another application is the next application in said task list.
21. The device of claim 17 wherein said keyboard application is configured to inhibit input focus shifting from said active application to said keyboard application.
22. The device of claim 17 wherein said keyboard application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.
23. A computing device running on a multitasking operating platform and including an active application having input focus and a user input keyboard application, said computing device comprising:
 - a touch sensitive panel;
 - a user input keyboard window displayed on said touch sensitive panel;and
 - an active application window displayed on said touch sensitive panel, wherein user input generated in response to user contact within said keyboard window

is forwarded to said active application, said active application retaining said input focus during generation and receiving of said user input.

24. The device of claim 23 wherein the user input received by said active application is displayed in said active application window.

25. The device of claim 24 wherein said keyboard window includes a plurality of user selectable keys.

26. The device of claim 25 wherein said keyboard window registers with said keyboard application.

27. The device of claim 25 wherein said keyboard application is configured to inhibit said keyboard from gaining and/or maintaining input focus.

28. The device of claim 27 wherein said keyboard application automatically shifts input focus to another application should input focus be given to said keyboard application.

29. The device of claim 28 wherein said another application is selected from a task list of said multitasking operating platform.

30. The device of claim 29 wherein the another application is the next application in said task list.

31. The device of claim 27 wherein said keyboard application is configured to inhibit input focus shifting from said active application to said keyboard application.

32. The device of claim 27 wherein said keyboard application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.
33. The device of claim 24 wherein said keyboard application is configured to inhibit said keyboard application from gaining and/or maintaining input focus.
34. The device of claim 33 wherein said keyboard application automatically shifts input focus to another application should input focus be given to said keyboard application.
35. The device of claim 34 wherein said another application is selected from a task list of said multitasking operating platform.
36. The device of claim 35 wherein the another application is the next application in said task list.
37. The device of claim 33 wherein said keyboard application is configured to inhibit input focus shifting from said active application to said keyboard application.
38. The device of claim 33 wherein said keyboard application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.
39. The device of claim 23 wherein said keyboard application is configured to inhibit said keyboard application from gaining and/or maintaining input focus.
40. The device of claim 39 wherein said keyboard application automatically shifts input focus to another application should input focus be given to said keyboard application.

41. The device of claim 40 wherein said another application is selected from a task list of said multitasking operating platform.
42. The device of claim 41 wherein the another application is the next application in said task list.
43. The device of claim 39 wherein said keyboard application is configured to inhibit input focus shifting from said active application to said keyboard application.
44. The device of claim 39 wherein said keyboard application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.
45. In a computing device having a touch sensitive panel on which an on-screen keyboard is displayed within a window, and running on a multitasking operating platform, a method of managing data input comprising:
 - detecting user contact on said touch sensitive panel;
 - forwarding data generated in response to contact on said touch sensitive panel outside of said on-screen keyboard window to said computing device for processing; and
 - forwarding data generated in response to contact on said touch sensitive panel within said on-screen keyboard window to an active application and inhibiting a shift in input focus from said active application to said on-screen keyboard.
46. The method of claim 45 further comprising displaying the data forwarded to said active application within an active application window displayed on said touch sensitive panel.

47. The method of claim 46 wherein said displayed data is textual data.
48. The method of claim 47 further comprising registering said keyboard window with said computing device.
49. The method of claim 48 further comprising configuring said keyboard window to inhibit said keyboard application from gaining and/or maintaining input focus.
50. The method of claim 49 further comprising shifting input focus automatically to another application should input focus be given to said keyboard window.
51. The method of claim 50 further comprising selecting the other application from a task list of said multitasking operating platform.
52. The method of claim 49 wherein during said second forwarding user input is forwarded to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.
53. In a computing device having a touch sensitive panel on which an on-screen keyboard is displayed within a window and running on a multitasking operating platform, a method of managing data input comprising:
 - detecting user contact on said touch sensitive panel;
 - forwarding data generated in response to contact on said touch sensitive panel outside of said on-screen keyboard window to said computing device for processing;
 - forwarding data generated in response to contact on said touch sensitive panel within said on-screen keyboard window to an active application; and

retaining input focus with said active application at least during generating and forwarding of data generated in response to contact on said touch sensitive panel within said on-screen keyboard window.

54. The method of claim 53 further comprising displaying the data forwarded to said active application within an active application window displayed on said touch sensitive panel.

55. The method of claim 54 wherein said displayed data is textual data.

56. The method of claim 55 further comprising registering said on-screen keyboard with said computing device.

57. The method of claim 56 further comprising configuring said on-screen keyboard to inhibit said on-screen keyboard from gaining and/or maintaining input focus.

58. The method of claim 57 further comprising shifting input focus automatically to another application should input focus be given to said on-screen keyboard.

59. The method of claim 58 wherein said another application is selected from a task list of said multitasking operating platform.

60. The method of claim 59 wherein the another application is the next application in said task list.

61. The device of claim 57 wherein said on-screen keyboard is configured to inhibit input focus shifting from said active application to said on-screen keyboard.

62. The device of claim 57 wherein said on-screen keyboard forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.
63. In computing device running on a multitasking operating platform and executing an active application having input focus, a method of inputting data to the active application via a user input application, said active application and user input application being displayed within respective windows on a touch sensitive panel, said method comprising:
 - detecting user contact within the window of said user input application and generating data corresponding to said user contact;
 - conveying the generated data to said active application; and
 - retaining input focus with said active application.
64. The method of claim 63 further comprising displaying the data forwarded to said active application within its respective window.
65. The method of claim 64 wherein said displayed data is textual data.
66. The method of claim 65 further comprising registering the user input application with its respective window.
67. The method of claim 66 further comprising configuring said user input application to inhibit said user input application from gaining and/or maintaining input focus.
68. The method of claim 67 further comprising shifting input focus automatically to another application should input focus be given to said user input application.

69. The method of claim 68 wherein said another application is selected from a task list of said multitasking operating platform.

70. The method of claim 69 wherein the another application is the next application in said task list.

71. The method of claim 66 wherein during said conveying said user input application forwards the generated data to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.

72. The method of claim 63 wherein said user input application includes a plurality of user selectable keys.

73. The method of claim 72 further comprising configuring said user input application to inhibit said user input application from gaining and/or maintaining input focus.

74. The method of claim 73 further comprising shifting input focus automatically to another application should input focus be given to said user input application.

75. The method of claim 74 wherein said another application is selected from a task list of said multitasking operating platform.

76. The method of claim 72 wherein during said conveying said user input application forwards the generated data to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.

77. A method of managing user input in a computer system having a display, comprising:

displaying an application window on said display, said application window corresponding to an active application operating on said computer system, and said active application having an input focus of said computer system;

displaying an input window on said display while said application window is displayed, said input window corresponding to an input application operating on said computer system;

receiving user input in said input window; and

forwarding data corresponding to said user input to said active application, wherein said active application retains said input focus of said computer system after said data is received.

78. The method of claim 77, wherein said input window contains a plurality of onscreen keys, said keys being selectable by a user input device.

79. The method of claim 78, wherein said input window is configured to inhibit said input window from gaining and/or maintaining input focus of said computer system.

80. The method of claim 79, wherein said user input represents textual data.

81. The method of claim 80, wherein said user input application is configured to inhibit said input window from gaining and/or maintaining input focus of said computer system.

82. The method of claim 81, wherein said user input represents textual data.

83. The method of claim 78, wherein said user input represents textual data.
84. A computing device, comprising:
 - a user input device;
 - a display configured to detect said user input device; and
 - a processor causing said computing device to perform the following steps:
 - display an application window corresponding to an active application having input focus of said computing device;
 - display a user input window corresponding to a user input application while said application window is displayed, said user input window including a plurality of onscreen keys corresponding at least to textual characters; and
 - receive user input on said display, said user input being located within said user input window, wherein said application window retains input focus after user input is received.
85. The device of claim 84, wherein said user input application transmits textual data corresponding to said user input to said active application.
86. The device of claim 84, wherein said user input application is configured to inhibit said user input window from gaining and/or maintaining input focus of said computing device.
87. The device of claim 86 wherein said user input application is configured to inhibit input focus shifting from said active application to said user input application.
88. The device of claim 86 wherein said user input application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.

89. A computing method, comprising:
displaying a user input window, said user input window including a plurality of onscreen keys corresponding at least to a plurality of textual characters;
displaying an application window, said application window having computer system input focus;
receiving data entered using one or more of said plurality of onscreen keys; and
forwarding received data to said application window, wherein said application window retains said input focus while said data is entered in said input window using said one or more of said plurality of onscreen keys.

90. The method of claim 89, wherein said user input window is configured to inhibit said user input window from gaining and/or maintaining input focus of said computer system.

91. A computing device running on a multitasking operating platform and including an active application having input focus and a user input keyboard application, said computing device comprising:
a touch sensitive panel;
a user input keyboard window displayed on said touch sensitive panel;
and
an active application window displayed on said touch sensitive panel, wherein user input generated in response to user contact within said keyboard window is treated as if said user input was generated by a physical input device and forwarded to said active application.

92. The device of claim 91 wherein the user input received by said active application is displayed in said active application window.

93. The device of claim 92 wherein said keyboard window includes a plurality of user selectable keys.
94. The device of claim 93 wherein said keyboard window registers with said keyboard application.
95. The device of claim 93 wherein said keyboard application is configured to inhibit said keyboard application from gaining and/or maintaining input focus.
96. The device of claim 95 wherein said keyboard application automatically shifts input focus to another application should input focus be given to said keyboard application.
97. The device of claim 96 wherein said another application is selected from a task list of said multitasking operating platform.
98. The device of claim 95 wherein said keyboard application is configured to inhibit input focus shifting from said active application to said keyboard application.
99. The device of claim 95 wherein said keyboard application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.
100. The device of claim 91 wherein said keyboard application is configured to inhibit said keyboard application from gaining and/or maintaining input focus.
101. The device of claim 100 wherein said keyboard application automatically shifts input focus to another application should input focus be given to said keyboard application.

102. The device of claim 101 wherein said another application is selected from a task list of said multitasking operating platform.

103. The device of claim 100 wherein said keyboard application is configured to inhibit input focus shifting from said active application to said keyboard application.

104. The device of claim 100 wherein said keyboard application forwards user input to said active application while bypassing code of said operating platform responsible for handling mouse events and switching input focus.

105. An electronic writeboard for communicating with a computer running on a multitasking operating platform, said computer executing an active application having input focus comprising:

- a touch sensitive panel on which screen image output of said computer is displayed, said touch sensitive panel being responsive to user contact and generating events;
- a keyboard window displayed on said touch sensitive panel and including a keyboard having a plurality of user selectable keys;
- a driver receiving events generated by said touch sensitive panel, said driver sensing user contact on said touch sensitive panel within said keyboard window and generating messages in response to user selection of keys of said keyboard; and
- a controller executing a keyboard application and receiving said messages, said keyboard application processing said messages to provide data directly to the active application running on said computer corresponding to keys of said keyboard contacted by said user to bypass code of said operating platform responsible for shifting input focus thereby to avoid input focus shifting to said keyboard application in response to user contacts on said touch sensitive panel within said keyboard window.

106. An electronic writeboard according to claim 105 wherein said driver passes events generated as a result of user contact on said touch sensitive panel outside of said keyboard window directly to said computer for processing.

107. An electronic writeboard according to claim 106 wherein during initialization, said controller registers with said driver and provides a keyboard window handle establishing the location of said keyboard window on said touch sensitive panel and a set of message identifiers to allow said driver to communicate with said keyboard application.

108. An electronic writeboard according to claim 107 wherein said driver uses said message identifiers to generate a message to said keyboard application in response to a mouse down event resulting from user contact on said touch sensitive panel within said keyboard window, said driver setting a flag so that subsequent mouse events result in the generation of messages to said keyboard application until a mouse up event is detected.

109. An electronic writeboard according to claim 105 wherein said keyboard application signals said computer to switch input focus automatically to another application if input focus is given to said keyboard application.

110. An interactive display system comprising:
an electronic writeboard;
a computer running on a multitasking operating platform connected to said electronic writeboard, said computer executing an active application having input focus; and
a projector coupled to said computer and projecting screen image output of said computer onto said electronic writeboard, wherein said electronic writeboard includes:

a touch sensitive panel on which the screen image output of said computer is displayed, said touch sensitive panel being responsive to user contact and generating events;

a keyboard window displayed on said touch sensitive panel and including a keyboard having a plurality of user selectable keys;

a driver receiving events generated by said touch sensitive panel, said driver sensing user contact on said touch sensitive panel within said keyboard window and generating messages in response to user selection of keys of said keyboard; and

a controller executing a keyboard application and receiving said messages, said keyboard application processing said messages to provide data directly to the active application running on said computer corresponding to keys of said keyboard contacted by said user to bypass code of said operating platform responsible for shifting input focus thereby to avoid input focus shifting to said keyboard application in response to user contacts on said touch sensitive panel within said keyboard window.

111. An interactive display system according to claim 110 wherein said driver passes events generated as a result of user contact on said touch sensitive panel outside of said keyboard window directly to said computer for processing.

112. An interactive display system according to claim 111 wherein during initialization, said controller registers with said driver and provides a keyboard window handle establishing the location of said keyboard window on said touch sensitive panel and a set of message identifiers to allow said driver to communicate with said keyboard application.

113. An interactive display system according to claim 112 wherein said driver uses said message identifiers to generate a message to said keyboard application in response to a mouse down event resulting from user contact on said touch sensitive panel within said keyboard window, said driver setting a flag so that subsequent

mouse events result in the generation of messages to said keyboard application until a mouse up event is detected.

114. An interactive display system according to claim 110 wherein said keyboard application signals said computer to switch input focus automatically to another application if input focus is given to said keyboard application.

115. In a touch sensitive panel on which an on-screen keyboard is displayed within a window, where user contact on said touch sensitive panel results in the generation of mouse events conveyed to a computer running on a multitasking operating system, a method of inhibiting input focus from being switched from an active application executed by said computer to said on-screen keyboard when said on-screen keyboard is touched, said method comprising the steps of:

detecting user contact on said touch sensitive panel;

forwarding events generated in response to contact on said touch sensitive panel outside of said on-screen keyboard window to said operating system for processing; and

processing events generated in response to contact on said touch sensitive panel within said on-screen keyboard window and forwarding said processed events to said active application to bypass code of said operating system responsible for shifting input focus and thereby inhibit a shift in input focus from said active application to said on-screen keyboard.

116. The method of claim 115 further comprising the step of automatically shifting input focus to another application if input focus is given to said on-screen keyboard.